

WHAT IS CLAIMED IS

1. A camera system comprising:
 - an image pickup device for taking an image formed by a light flux from an object;
 - a luminance sensor for sensing a luminance of the object;
 - a detector for judging whether a proper exposure time of the image pickup device which is calculated by the luminance of the object is longer than a predetermined time period or not; and
 - a controller for controlling the image pickup device for taking a plurality of images of the same field of the object by a control exposure time equal to or shorter than the predetermined time period, when the calculated exposure time is longer than the predetermined time period.
2. The camera system in accordance with claim 1, wherein a plurality of the image data of the same object taken by a plurality of the image taking operation are composited for forming a single image data.
3. The camera system in accordance with claim 2, wherein the image data which is the composition of a plurality of the image data has substantially a proper quantity of exposure.
4. The camera system in accordance with claim 1, wherein the control exposure time T_2 and a number of the image taking operation C are shown by the following equations;
 - $C = \text{INT}(T_1/T_0)$ and
 - $T_2 = T_1/C$

hereupon, a symbol T1 designates the proper exposure time, a symbol T0 designates a limit exposure time causing a camera shake, and the symbol INT signifies raising fractions to form an integer.

5. The camera system in accordance with claim 1, wherein the control exposure time T2 and a number of the image taking operation C are shown by the following equations;

$$C = \text{INT}(T1/T3) \text{ and}$$

$$T2 = T1/C$$

hereupon, a symbol T1 designates the proper exposure time, a symbol T3 designates an optional time shorter than a limit exposure time T0 causing a camera shake, and the symbol INT signifies raising fractions to form an integer.

6. The camera system in accordance with claim 2 further comprising an image data corrector, and wherein the single image data is composited after correcting each image data.

7. The camera system in accordance with claim 6, wherein the correction of the data is a correction of a rotation shake around each axis of an orthogonal coordinates including an optical axis of an optical lens system.

8. The camera system in accordance with claim 7, wherein the rotation shake around the optical axis is corrected by a method different from that for correcting the rotation shakes around the other two axes perpendicular to the optical axis.

9. The camera system in accordance with claim 8, wherein the image pickup device has an effective region larger than an actual

frame size of the image; the rotation shakes around the two axes perpendicular to the optical axis are corrected by shifting of regions from which the image data are read out; and the rotation shake around the optical axis is corrected by rotating of the image data around the optical axis.

10. The camera system in accordance with claim 9, wherein the sifting of the regions from which the image data are read out for correcting the rotation shakes around the two axes perpendicular to the optical axis are executed by a software process; and the rotating of the image data around the optical axis for correcting and the rotation shake around the optical axis is executed by a hardware process.

11. The camera system in accordance with claim 7, wherein the rotation shakes around the two axes perpendicular to the optical axis is first corrected, and the rotation shake around the optical axis is corrected after.

12. The camera system in accordance with claim 7, wherein the rotation shakes around the two axes perpendicular to the optical axis and the rotation shake around the optical axis are corrected by affine conversion at the same time.

13. The camera system in accordance with claim 9, wherein the region from which the image data are read out is larger than the actual frame size of the image.

14. The camera system in accordance with claim 13, wherein the region from which the image data are read out is gradually enlarged corresponding to the increase of the number of the image

taking operation.

15. The camera system in accordance with claim 6 further comprising a moving sensor for sensing a quantity of movement of a camera from a position where a first image is taken to a position where the last image is taken when the image is taken more than twice, and wherein each image data is corrected by corresponding data of the quantity of movement directly and the corrected data is composited one after another.

16. The camera system in accordance with claim 6 further comprising a moving sensor for sensing a quantity of movement of a camera from a position where a first image is taken to a position where the last image is taken when the image is taken more than twice, and a memory for memorizing each image data and data of the quantity of movement corresponding thereto temporally, and wherein each image data is corrected by responding to the quantity of movement after all the image data are taken, and the corrected image data are composited.

17. The camera system in accordance with claim 16, wherein the image data are compressed when it is memorized in the memory.

18. The camera system in accordance with claim 17, wherein at least one of a compression ratio of the image data, a method of the data compression and a resolution of the image is changed corresponding to the number of the image taking operation.

19. A camera system for memorizing a plurality of image data comprising: a memory region for memorizing data temporally;

and a controller for compressing image data except a standard image data and for memorizing the compressed image data into the memory region; and wherein

the controller selects a compression ratio and/ or a method of the data compression corresponding to a condition when the image data are taken.

20. The camera system in accordance with claim 19, wherein the condition when the image data are taken is at least one of a luminance of an object, a number of image taking operation, a region from which image data are read out and a time period from a standard time to a time of taking an image.

21. A camera system comprising:

an image pickup device for taking an image formed by a light flux from an object;

an accumulator for memorizing a first image data; and

a controller for correcting each image data subsequently taken just after the image taking operation and for compositing the corrected image data on the image data memorized in the accumulator.

22. A camera system comprising:

an image pickup device for taking an image formed by a light flux from an object;

a memory for memorizing data temporally;

a controller for taking a plurality of images of substantially the same portion of an object by the image pickup device, temporally memorizing each image data and data corresponding to the image

taking operation into the memory, and the image data memorized in the memory are composited after completing all the image taking operation.

23. The camera system in accordance with claim 22, wherein each image data is corrected by using the data corresponding to the image taking operation, and the corrected image data are composited.

24. The camera system in accordance with claim 23, wherein the data corresponding to the image taking operation is a quantity of movement of the camera and a direction of movement in a time period from a time when a first image data is taken to a time when the image data is taken after the second image taking operation.

25. The camera system in accordance with claim 24, wherein each image data is taken in an exposure time equal to or shorter than a limit exposure time causing a camera shake.

26. A camera system comprising:

an image pickup device for taking an image formed by a light flux from an object; and

a controller for taking a plurality of images of substantially the same portion of an object by the image pickup device, and enlarging a region from which the image data are read out is gradually enlarged when the image data is taken.

27. The camera system in accordance with claim 26, wherein a center of the region from which the image data are read out is serially moved corresponding to a quantity of movement and direction of movement in a time period from a time when a first image data is

taken to a time when the image data is taken after the second image taking operation.

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